

Department of Water Resources
FloodSAFE Environmental Stewardship and
Statewide Resources Office

Ecosystem Restoration Projects
Implemented by Reclamation Districts
Through Delta Levees Programs

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Delta Levees Program

Subventions



Ensure Maintenance

Special Projects



Critical Levee Stability

Water Code Sections 12314 (c) and 12987 (c) Levee expenditures must result in no net long-term loss of fisheries or wildlife habitat

Water Code Sections 12314 (d) and 12987 (d) require the program to result in net long-term improvement of habitat

Ecosystem Restoration Projects/Programs

1. Dutch Slough
2. North Delta (McCormack-Williamson)
3. Meins Landing
4. Sherman Island Setback, Part 1
5. Sherman Island Setback, Part 2
6. Sherman Island Scour Pond
7. Mayberry Farms, Sherman Island
8. Parcel 11 and 12, Sherman Island Mitigation
9. Twitchell Island Wetlands Habitat and Carbon Sequestration
10. Twitchell Island Rice Farming and Carbon Sequestration
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15. Programmatic Mitigation, Bulk Purchase of Credits
16. Central Valley Flood System Conservation Strategy

Dutch Slough Project Location



Suisun Marsh

Sacramento River

Sherman Island

Twitchell Island

Bradford Island

San Joaquin River

Jersey Island

Big Break



Dutch Slough

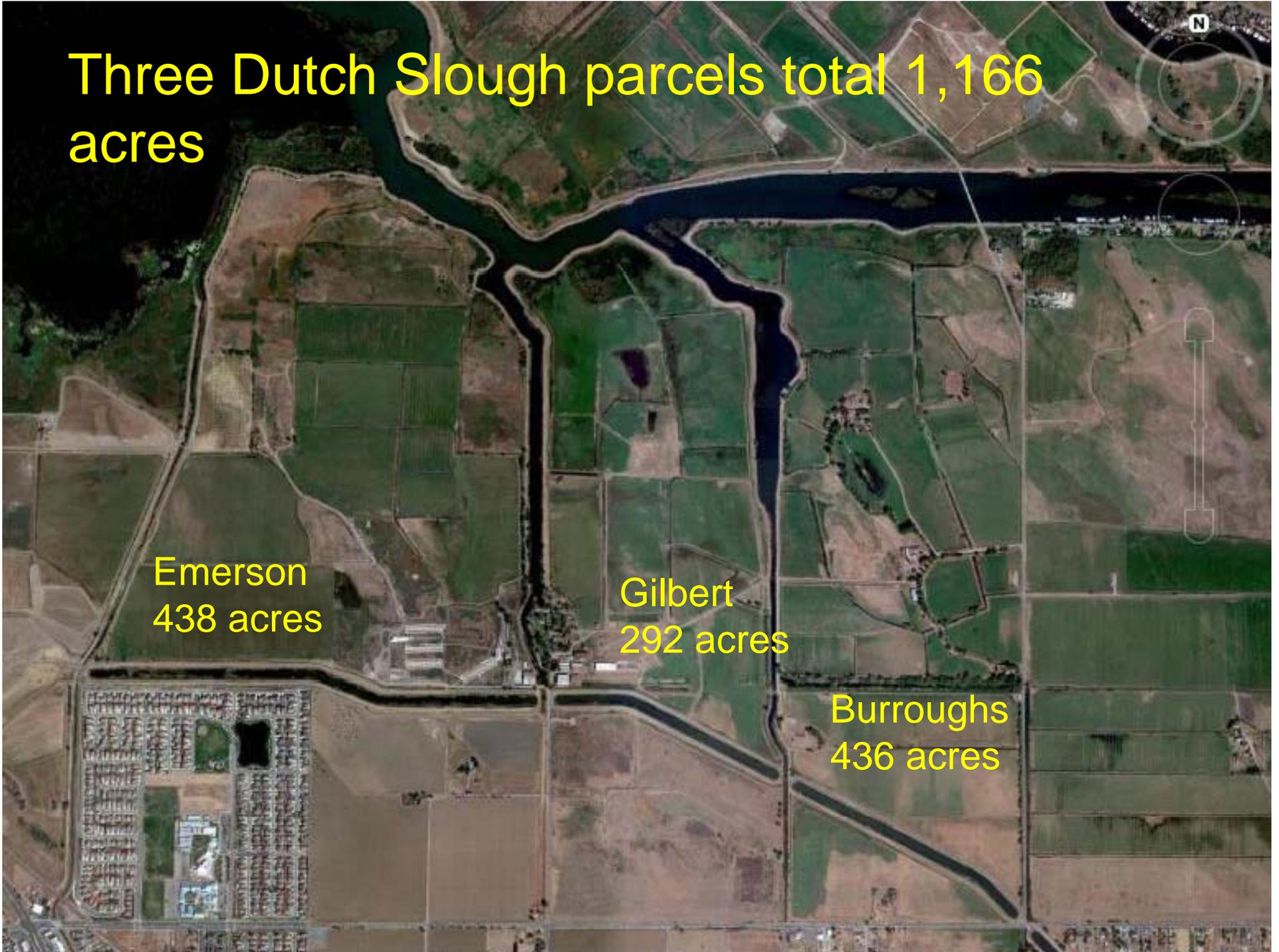
Dutch Slough Tidal Marsh Restoration

Three Dutch Slough parcels total 1,166 acres

Emerson
438 acres

Gilbert
292 acres

Burroughs
436 acres



Dutch Slough Project Goals

1. Ecological: Benefit native species by re-establishing natural ecological processes and habitats.
2. Scientific: Assess the development of the restored habitats and measure ecosystem responses so that future Delta restoration projects will be more successful.
3. Social: Provide shoreline access, educational and recreational opportunities.

Dutch Slough Milestones

- 2003-Land purchased with funds (\$28M) from CALFED and State Coastal Conservancy
- 2006-Feasibility Study/Conceptual Plan released
 - Adaptive Management Working Group (2003-06)
 - Coastal Conservancy, DFG, DWR, CA Bay-Delta Authority, US EPA, Natural Heritage Institute, UC Berkeley, UC Davis, USDA, U. of Washington, USGS, and several private consultants (Brown and Caldwell, EDAW—now AECOM, Phil Williams and Assoc, and Wetlands and Water Resources)
- 2008-Draft EIR released

Dutch Slough Milestones cont.

- 2009-Restoration contractor hired to prepare final conceptual design and engineering drawings
- March 2010-Final EIR approved and certified
- September 2010-Draft revised conceptual plan
 - Technical Advisory Committee (aka Technical Advisory Team) active 2010- ongoing
 - DFG, DWR, UC Davis, Coastal Conservancy, USEPA, Natural Heritage Institute, USDA, USBR,
 - U. of Wash, Delta Science (formerly Bay Delta Authority)

Restoration Planning

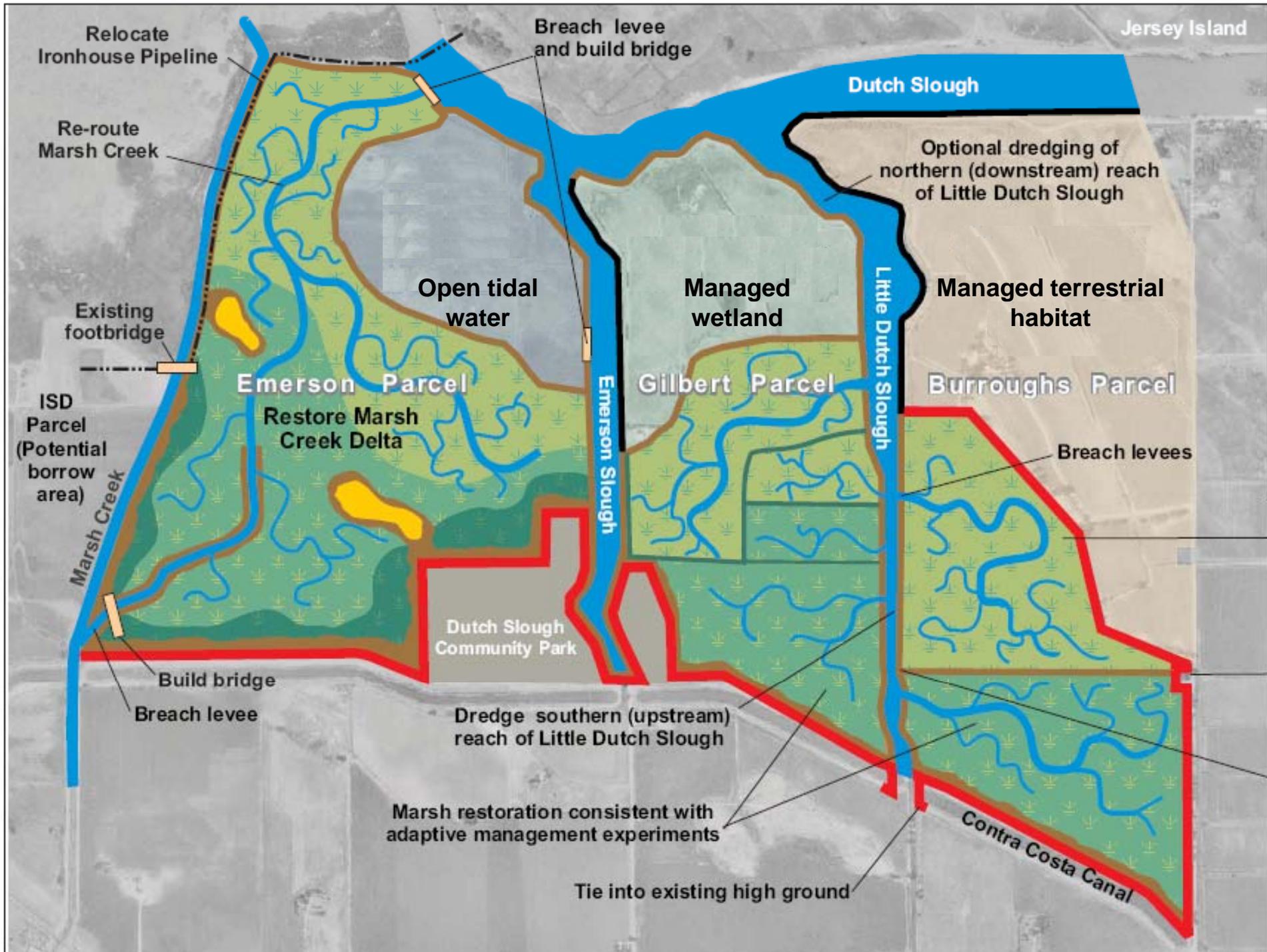
All contracting is done by the RD 2137

RD has hired Phil Williams and Assoc to prepare Final Conceptual Plan and 80% engineering drawings

Technical and scientific issues will be addressed by PWA and a Technical Advisory Team

Project Oversight

- Management Team: staff from DWR, SCC, RD 2137 make design decisions based on contractor recommendations
- Technical Advisory Team: provides technical input to PWA and Management Team
- Executive Committee: executives from DWR, SCC, DFG make high level decisions.



Funding

- Final Conceptual Design--\$500,000 from DWR + \$280,000 from SCC
- FY 09/10 \$4.4 M
- FY 10/11 \$3.5 M
- DFG commitment of ~\$5M from ERP
- SCC commitment of ~\$5M
- Applied for \$1M USFWS National Coastal Wetland Conservation Grant

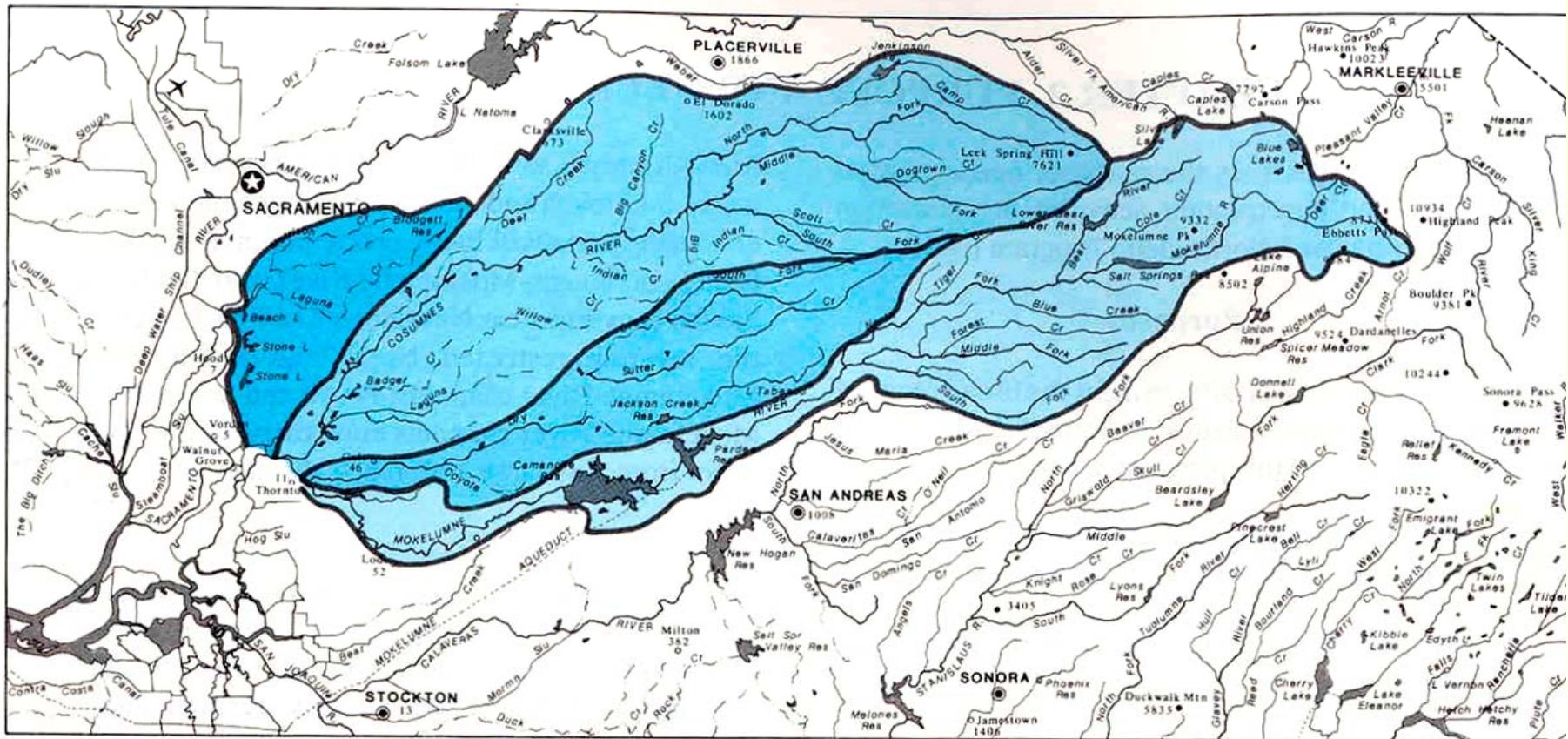
Tentative Implementation Schedule

Nov 2010	Final Conceptual Design
Spring 2011	Full Project engineering drawings
Summer 2011	Import material to Gilbert and begin grading
2012	Tule cultivation on Gilbert, cut and fill on Emerson, start Burroughs levee
2013	Breach Gilbert, begin tule cultivation on Emerson, begin grading on Burroughs
2014	Breach Emerson, tule cultivation on Burroughs
2015	Breach Burroughs

- 1997** McCormack-Williamson Tract,
Dead Horse Island, Glanville Tract
- 1986** McCormack-Williamson Tract, Dead
Horse Island, New Hope Tract,
Glanville Tract, Tyler Island, I-5
- 1980** Dead Horse Island
- 1964** McCormack-Williamson Tract,
Glanville Tract
- 1958** McCormack-Williamson Tract, Dead
Horse Island, Glanville Tract
- 1955** McCormack-Williamson Tract,
Dead Horse Island, New Hope
Tract, Glanville Tract, Tyler Island
- 1950** McCormack-Williamson Tract,
Dead Horse Island, New Hope
Tract



North Delta Project Watershed Boundaries



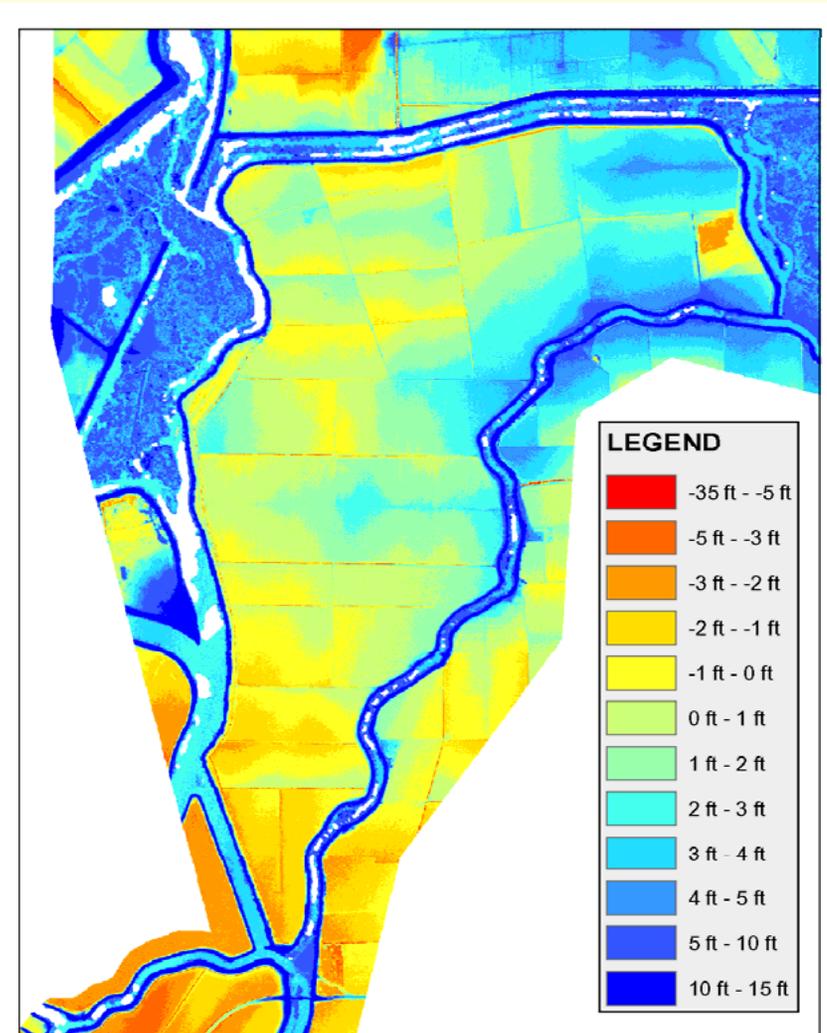
- LEGEND**
-  Morrison Creek Drainage Basin
 -  Cosumnes River Drainage Basin
 -  Dry Creek Drainage Basin
 -  Mokelumne River Drainage Basin

Flood Characteristics of the North Delta



McCormack-Williamson Tract (MWT)

- 1919 – MWT reclaimed
- 1947 – Legal Agreement with New Hope Tract
- 1983 – McCormack signs 50-year land lease agreement
- 1999 – TNC purchases MWT with CALFED ERP funds (Prop 204) for \$5.6 million
- 2003 – North Delta Flood Control and Ecosystem Restoration Project Draft EIR
- 2010 – Final EIR



North Delta Flood Control and Ecosystem Restoration Project EIR -- Project Groups

- Group I - McCormack-Williamson Tract, Grizzly Slough Property
- Group II - Staten Island Detention Basins, Dredging Mokelumne River

Broad Agency and Stakeholder Coordination

- North Delta Improvements Group
- North Delta Agency Team
- Ecological Restoration Coordination Team

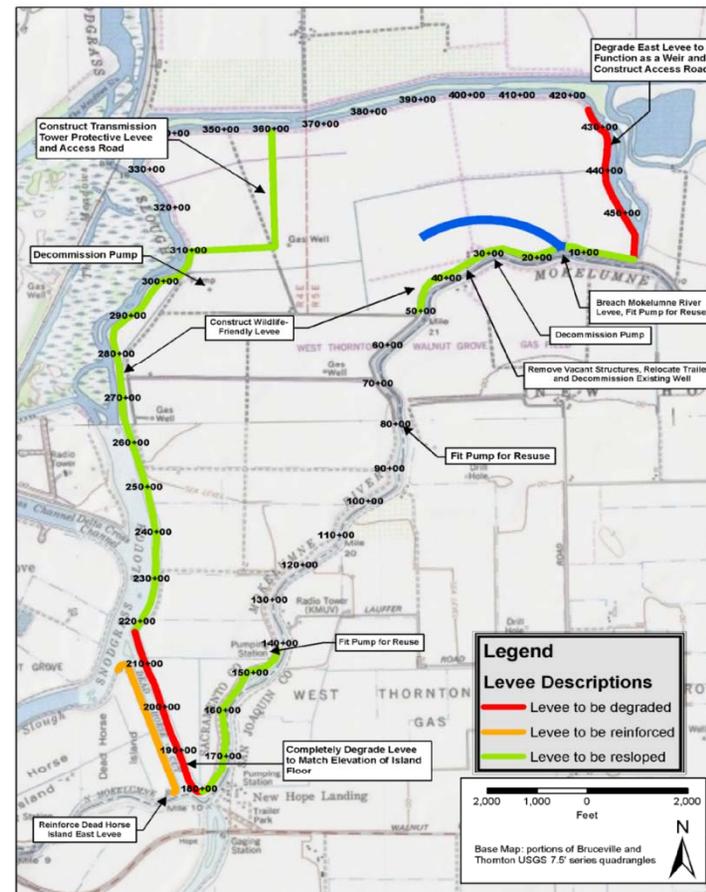
DWR, DFG, USFWS, NOAA, TNC, CBDA,
UC Davis

North Delta area stakeholders

(land owners, RDs, North Delta Water Agency,
etc.)

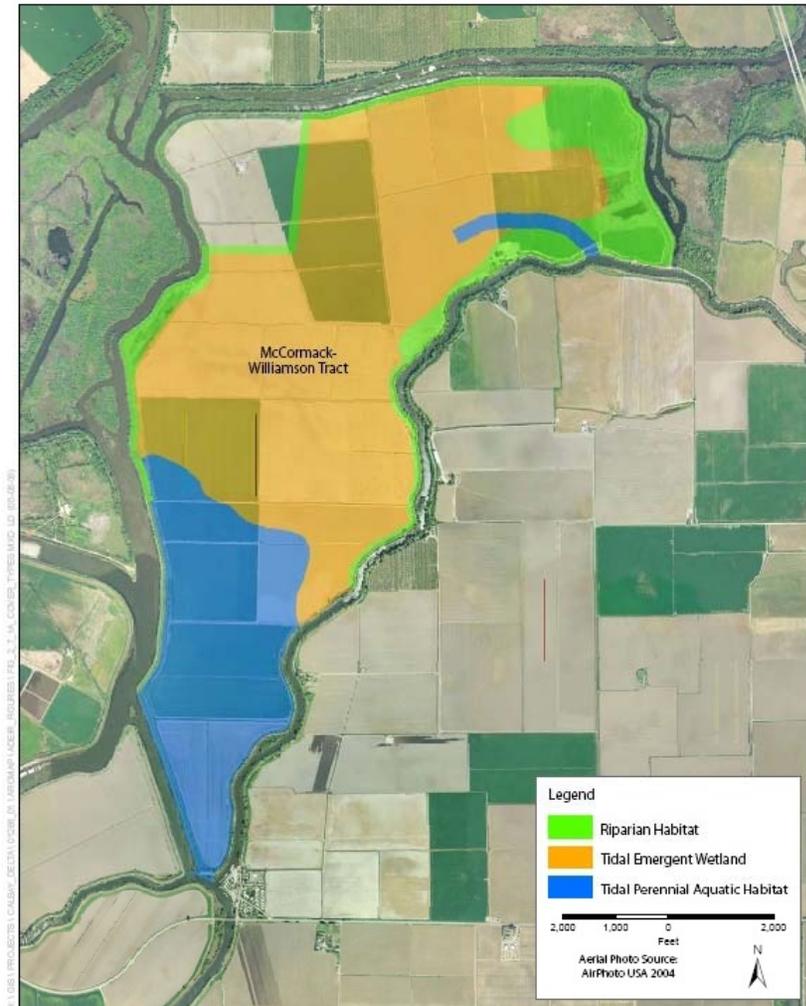
McCormack-Williamson Tract, Preferred Alternative 1-A

- Reinforce Dead Horse Island east levee
- Breach Mokelumne River levee
- Degrade east levee
- Degrade southwest levee
- Construct wildlife friendly levees
- Raise downstream levees on North Fork of Mokelumne River (inches)



Types and areal extent of habitat anticipated upon completion of Alternative 1-A:

1. Tidal Perennial Aquatic Habitat
2. Tidal Emergent Wetland
3. Riparian habitat



Jones & Stokes

Figure 2-7
Anticipated Cover Types from Fluvial Process Optimization
(Alternative 1-A)

Breakdown of estimated project costs in millions

- Alternative 1-A Total \$44
 - McCormack-Williamson Tract actions \$25
- Alternative 1-B Total \$47
 - McCormack-Williamson Tract actions \$28
- Alternative 1-C Total \$51
 - McCormack-Williamson Tract actions \$32

USACE CALFED Levee Stability Program

- USACE CALFED Levee Stability Program has expressed considerable interest in the McCormack-Williamson Tract component of project
- Partner with DWR, RD 2110, and The Nature Conservancy
- USACE has committed federal funds (50:50 cost match) to evaluate the project for Corps involvement
 - Preliminary Draft Project Implementation Report (PIR)
 - Project Management Plan
 - Federal Cost Sharing Agreement
 - Final PIR
- USACE funds will be used to enhance or expand various features of the project beyond those funded by the State

Project Benefits

- ***Benefits***
 - Provide flood protection to nearly 27,000 acres of surrounding land by achieving stage reductions (targeted at water surface elevations)
 - Reduce risk of catastrophic levees failures based on the 1986 and 1997 hydrology's. Improve river floodplain connectivity
 - Create approximately 1200 acres of tidal marsh, 220 acres of riparian habitat, 190 acres of seasonal wetlands, and 160 acres of upland habitat
 - Improve river floodplain connectivity

Project Benefits, cont.

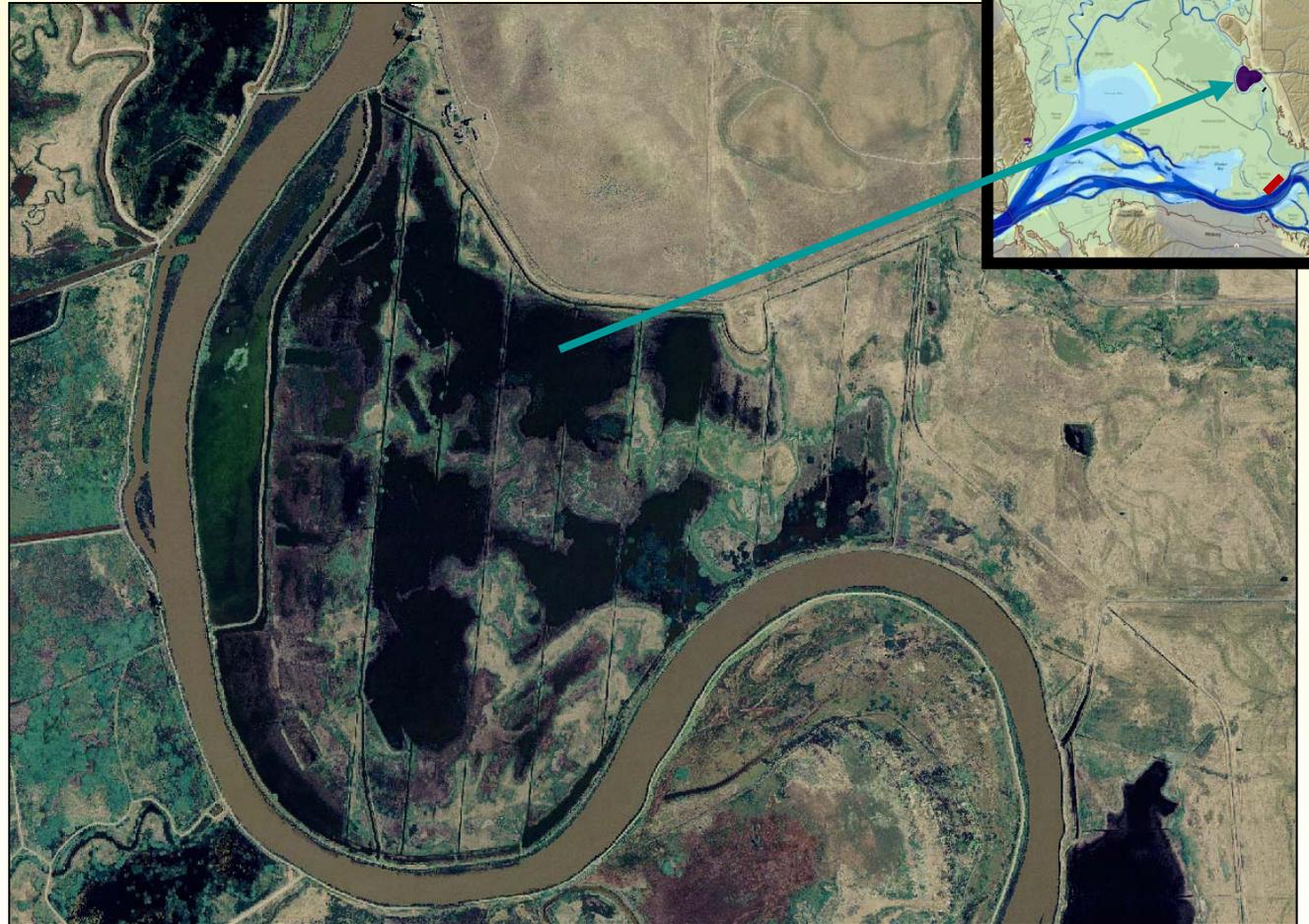
- ***Demonstrates successful integration with other DWR planning efforts and partnership with federal and private entities***
 - Consistent with conservation goals of BDCP
 - Consistent with flood management and conservation goals of CVFPP
 - Consistent with net enhancement goals of Delta Levees Program
 - Federal (USACE) State (DWR) and NGO (TNC) partnership-model for future state investments

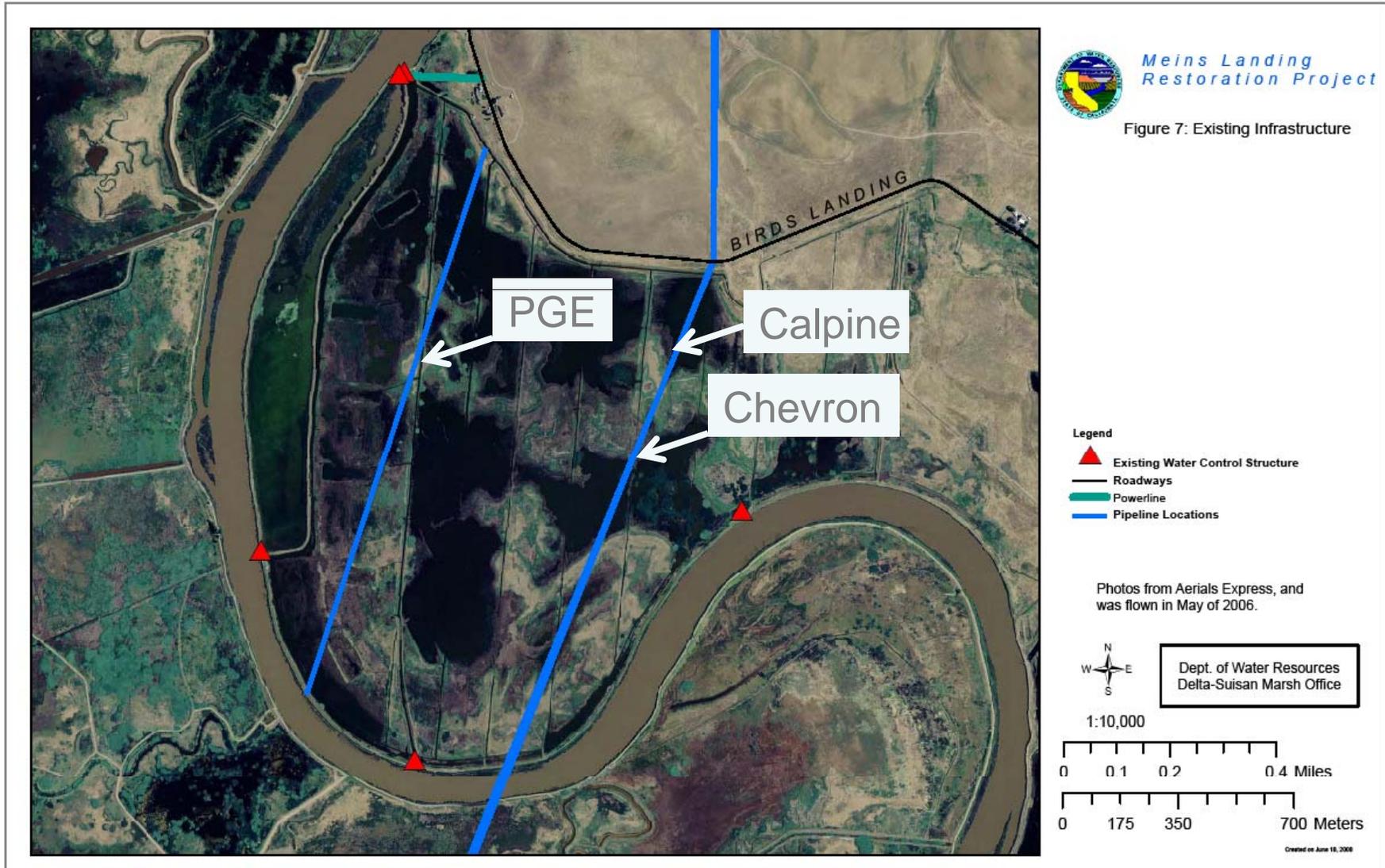
Timeline for Project Implementation

- Completion of USACE's Project Implementation Report (Study Phase) – Spring/Summer 2012
- Project Construction – Spring/Summer 2013

Meins Landing Restoration Project

- ❑ 666-acre duck club in Suisun Marsh
- ❑ Purchased in 2005
- ❑ Multi-agency restoration planning





Next Steps

- Develop alternatives for providing multi-species habitat enhancement and mitigation restoration
- Secure support from SMP partners
- Decide how to move forward within the context of Suisun Marsh Plan

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